

SO₂ Modeling Update

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Where we are now

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► Initial Designations

- Published August 2013 and effective October 2013
- Based on violating monitors
- 29 areas in 16 states
- SIPs for these areas due April 2015

► Nonattainment area SIP guidance

- Released April 23, 2014 as Steve Page memo to Regions
- Policy, modeling, emissions limits guidance

► Data Requirements Rule

- Proposed rule published May 13, 2014 in FR
- Large sources characterize air quality via modeling or monitoring
- Modeling TAD & Monitoring TADs issued to aid states

SO₂ SIP modeling guidance

- Appendix A of SIP guidance memo
- Offers guidance on:
 - Model selection
 - AERMOD or other approved Appendix A model depending on application
 - Alternative model must be justified
 - Modeling domain
 - Sources to explicitly model vs. represent via background
 - Screening, significant concentration gradient criterion
 - Receptors (attainment must be shown throughout domain)

SO₂ SIP modeling guidance

- Offers guidance on:
 - Source characterization
 - Allowable emissions (Table 8-1 of App. W)
 - Stack heights and GEP policy
 - Meteorological data
 - Representativeness
 - NWS, site-specific and upper-air
 - Background concentrations
 - Running AERMOD and implications on design value calculations
 - Documentation

SO₂ SIP Guidance vs. other pollutants' SIP Guidance

- SO₂ guidance differs from that of ozone and PM_{2.5}
- SO₂ uses allowables or PTE, 5 years of NWS or at least one year of site-specific data, and the absolute model results at all receptors are used for NAAQS evaluations
- Ozone and PM use actual and projected emissions, one year of met data, photochemical grid modeling, and relative response factors for NAAQS evaluations

Data Requirement Rule TADs

- Initial draft modeling and monitoring TADs released May 2013
- Revised versions released December 2013 with revisions based on comments received on the May drafts
- May be revised based on proposed DRR public comments later in 2014
- Monitoring TAD offers recommendations on monitoring siting including the use of modeling
- Modeling TAD offers recommendations on modeling to act as a surrogate for monitoring

Modeling TAD

- Offers recommendations on modeling to act as surrogate for monitoring
 - Results can be used to designate area
- Recommendations
 - Model selection
 - Modeling domain and receptors
 - Sources to explicitly model vs. represented by background
 - Source characterization
 - Emissions inputs
 - Calculation of temporally varying emissions (most recent 3 years)
 - Allowables
 - Meteorological inputs
 - 3 years of data
 - Background concentrations
 - Documentation
 - Appendices with example calculations
 - Similar to SIP guidance with some exceptions

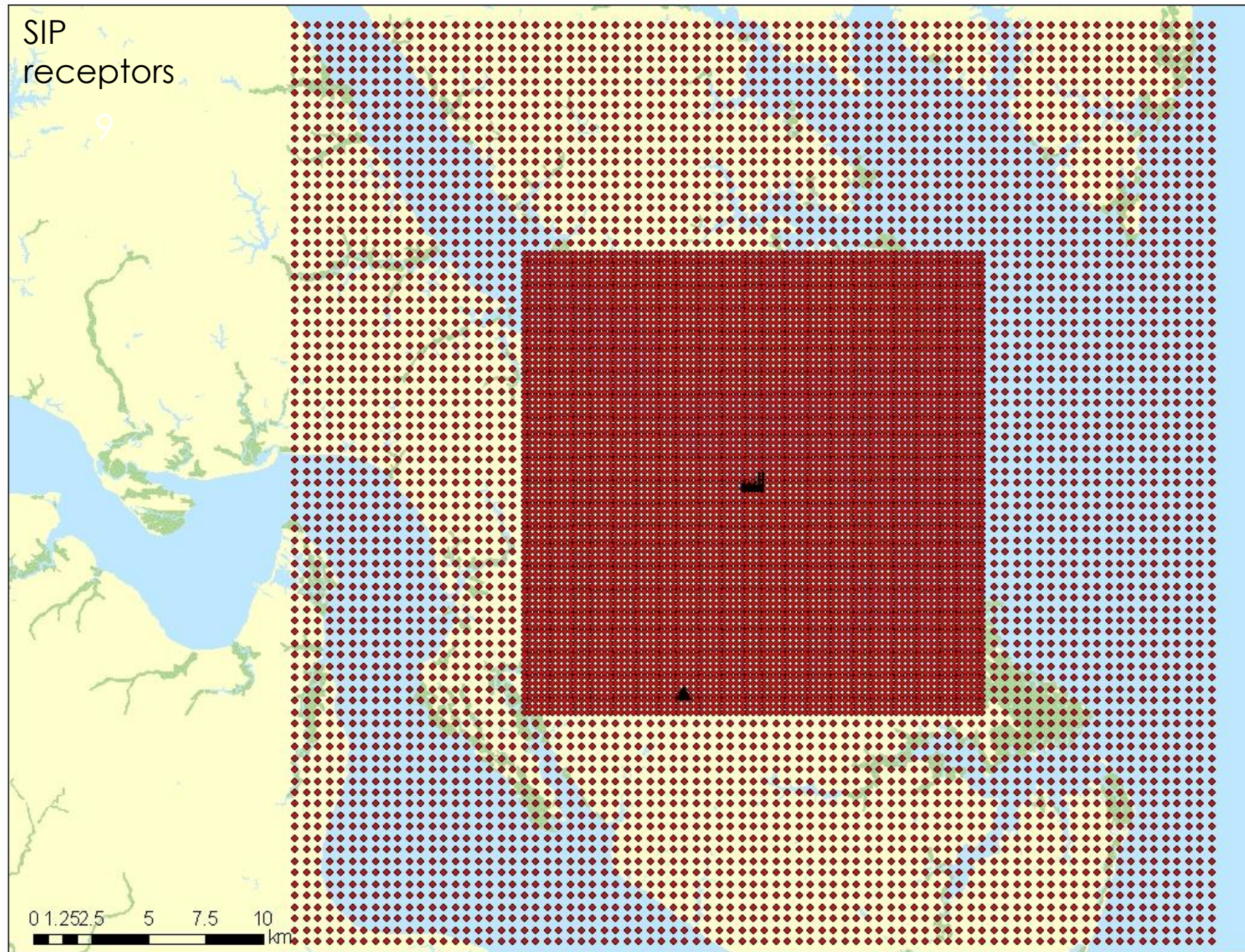
Designations modeling vs. SIP & PSD modeling

Parameter	SIP/PSD	Designations
Emissions	Allowables	Most recent 3 years of actual temporally varying or allowables
Stack heights	GEP policy	Actual heights (actual emissions); GEP policy with allowables
Meteorology	5 years NWS; at least 1 year site-specific	Most recent 3 years NWS or site-specific data(concurrent with emissions)
Receptors	Ambient air	Ambient air where monitors could be placed (i.e. no receptors over water bodies)

SIP
receptors

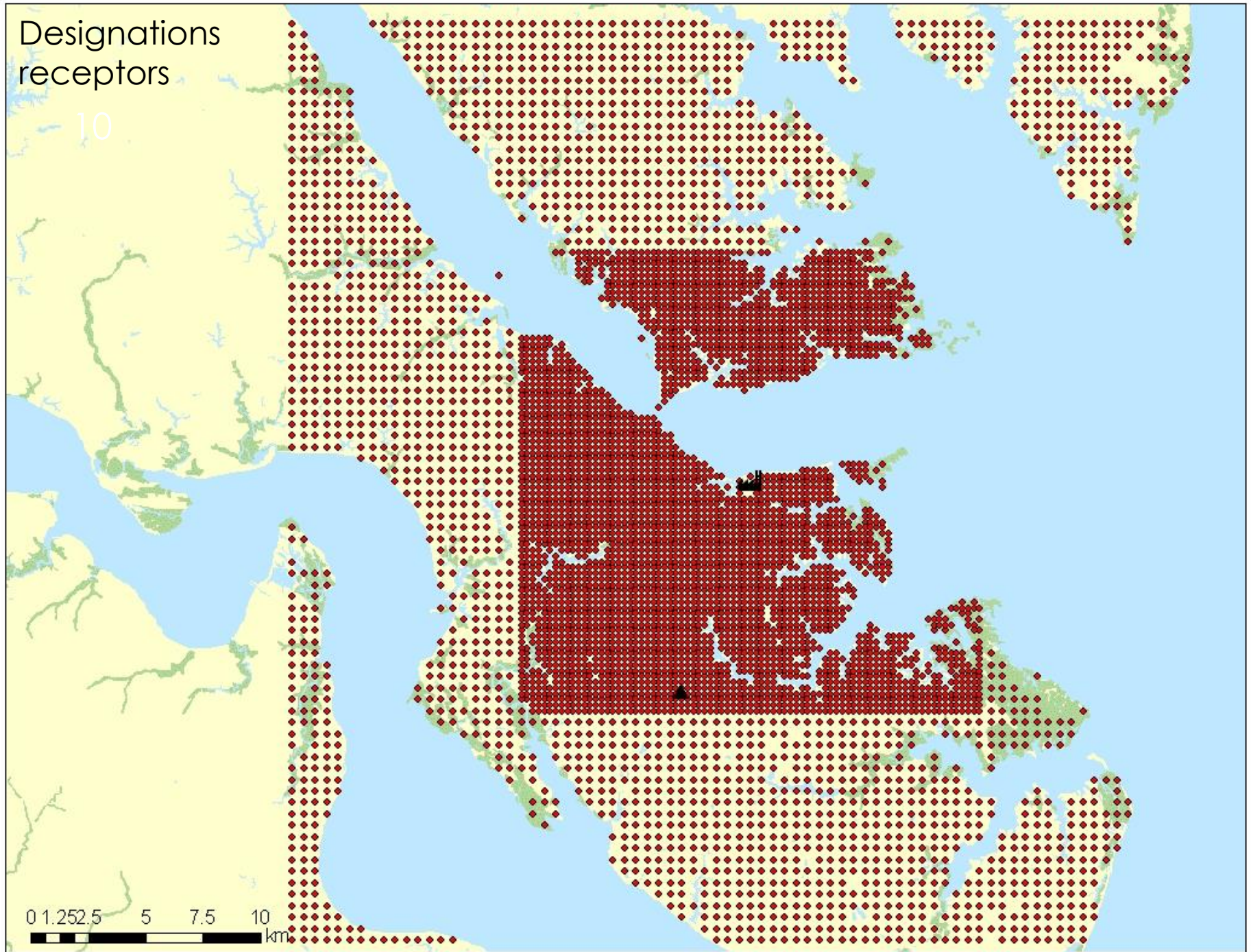
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0 1.25 2.5 5 7.5 10 km



Designations
receptors

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0 1.25 2.5 5 7.5 10 km

Questions?

